

## REMARKS

*Claims 8-9 and 16-20 stand rejected under 35 U.S.C. 102 as being anticipated by Stubbs et al.*

Applicants respectfully disagree and request that this rejection be withdrawn.

Stubbs et al. teaches a process for preparing a french fry. As set forth in Fig. 1, the cut potato strips are “blanched 25 in steam or hot water at temperatures between 145°F to 212°F (63°C - 100°C) for about 5 to 30 minutes to **inactivate enzymes** [emphasis added].” See also, Example 1, lines 30 – 38. Thus, the potato piece processed as taught by Stubbs et al. is essentially cooked, its enzymes are inactivated, and incapable of growth if planted. Applicants submit herewith a Declaration by Dr. Robert D. Smith, an expert in Plant Biology (Exhibit A). Dr. Robert Smith declares that blanching of potato pieces inactivates enzymes that are necessary and required for growth of a cut potato piece. See the following Quote of Dr. Robert Smith:

“Subjecting potato pieces to steam or hot water at temperatures between 145<sup>0</sup>F and 212<sup>0</sup>F (63<sup>0</sup>C to 100<sup>0</sup>C) for about 5 to 30 minutes, i.e. blanching, inactivates enzymes that are necessary and required for growth. (Declaration by Smith, paragraph 6).”

In contrast to Stubbs et al. the Applicants teach a composition comprising a cut piece and coating, wherein said cut potato piece can *grow into a potato plant*. Accordingly, there is no anticipation of claims 8-9 and 16-20, and Applicants respectfully request that the rejection be withdrawn.

*Claims 8-9 and 16-20 stand rejected under 35 U.S.C. 103(a) as being obvious over McArdle over Redenbaugh.*

The Applicants submit that it would not be obvious to one skilled in the art at the time the invention was made to combine the teachings of McArdle with Redenbaugh for the reasons stated below.

First McArdle does not teach or suggest a crop seed or crop seed coating. Second, one skilled in the art would not be motivated to combine the teachings of Redenbaugh with McArdle because Redenbaugh already teaches an advantageous crop seed coating that improves germination.

Given the functional seed coatings taught in Redenbaugh, there is no reason that one would be motivated to combine the teachings of Redenbaugh with McArdle.

Furthermore, Redenbaugh teaches a coating of water saturated hydrogel (See Column 3 lines 64-68 and column 17, Claim 1, lines 38-39), which contains free water that may be used by the seed to initiate the process of germination at the time of delivery (Column 4, lines 54-56). This is in contrast to the crop seed coating of the present invention that is dry and keeps out moisture (Declaration by Smith, paragraph 10). Thus, Redenbaugh teaches away from the present invention, further rendering no motivation to combine.

The Examiner contends that, given the advantages of coating seeds as taught by Redenbaugh, one of ordinary skill in the art would be motivated to modify the peptide-polysaccharide complex as taught by McArdle and use it as a crop seed coating. The Applicants respectfully disagree and submit that Redenbaugh teach a perfectly good crop seed coating that improves germination. In addition, the coatings of Redenbaugh are of a *saturated hydrogel*. Given the functional seed coatings taught in Redenbaugh, and the fact that Redenbaugh teaches away from the Applicant's invention, there is no reason why one skilled in the art would be motivated to combine the teachings therein.

Furthermore, as indicated by Dr. Robert Smith in the attached Declaration (Exhibit A) (Declaration by Smith, paragraph 12), neither McArdle nor Redenbaugh, teach or suggest the unexpected results of the Applicants coating, which show a significant increased rate of emergence and seed piece integrity. See for example, Example 1 of the Application which shows a greater than 20% increase in emergence and greater than a 50% increase in seed integrity in comparison to emergence and seed integrity in the absence of treatment. The early stage protection offered by the composition results in a yield increase of economically valuable tubers up to a 73% (Specification, page 11, lines 23-28).

In addition, the Applicant's show that there is a 21.8% increase in yield when potato seed pieces are coated with the Zein/polysaccharide complex, as compared to treatment of seeds with a conventional fungicide. This 21.8% increase in yield resulted in the production of an additional 650,000 pounds of potatoes for a 100 acre plot (Specification, page 13, lines 12-14) (Declaration by

Smith, paragraph 13). There is nothing in Redenbaugh or McArdle that would suggest to one skilled in the art the surprising crop benefits illustrated by the Applicants (Declaration by Smith, paragraph 12).

Accordingly, the Applicant's invention is not rendered obvious by the combination of McArdle and Redenbaugh and Applicants respectfully request that the rejection of claims 8-9 and 16-20 under 35 U.S.C. 103(a) as being obvious over McArdle over Redenbaugh be withdrawn.

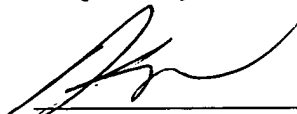
In the event that there are any questions relating to this Amendment or to the application in general, it is kindly requested that the Examiner contact the undersigned attorney concerning the same to expedite prosecution of this application.

Entry of the foregoing and prompt and favorable consideration of the subject application on the merits are respectfully requested.

The Examiner is authorized to charge fee deficiencies or credit overpayments associated with the submission of this document to the NIXON PEABODY LLP Deposit Account No. 50-0850.

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Respectfully submitted,



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